

REMARKS

The present Amendment amends claims 1, 5 and 9. Therefore, the present application has pending claims 1, 5 and 9.

35 U.S.C. §103 Rejections

Claims 1, 5 and 9 stand rejected as being unpatentable over Kenji, et al. ("Kenji") in view of Foladare, et al. ("Foladare"). This rejection is traversed for the following reasons. Applicants submit that the features of the present invention, as now more clearly recited in claims 1, 5 and 9, are not taught or suggested by Kenji or Foladare, whether taken individually or in combination with each other as suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Amendments were made to the claims so as to more clearly describe features of the present invention. Specifically, the claims were amended to correct minor informalities, and these changes do not result in a change in scope.

The present invention, as recited in claims 1, 5 and 9, provides a communication control method, a communication control system, and a storage medium containing a program for executing the steps of a communication control method. The communication control method controls wireless data communication conducted between a portable information communication terminal and a data communication apparatus by way of a communication network. The communication control method includes a step of determining whether wireless data communication between the portable information communication terminal and the data communication apparatus has been interrupted by disconnection of a communication

line and whether the disconnection of the data communication is a normal termination of data communication. In response to a normal termination of data communication between the portable information communication terminal and the data communication apparatus, the method performs a step of clearing accounting of the data communication that was interrupted by disconnection of the communication. As recited in the claims, this step of clearing the accounting occurs if the interrupted data communication was interrupted within a predetermined time before the normal termination of data communication. The prior art does not teach or suggest all these features.

The above described features of the present invention, now more clearly recited in the claims, are not taught or suggested by any of the references of record. More specifically, the features are not taught or suggested by either Kenji or Foladare, whether taken individually or in combination with each other.

Kenji discloses a communication control method for controlling lines between terminal equipment and a host device. However, Kenji does not teach or suggest the step of determining whether wireless data communication has been interrupted, as recited in claims 1, 5 and 9 of the present invention. Furthermore, and as conceded by the Examiner, Kenji does not teach or suggest the step of clearing accounting on the data communication that has been interrupted, in response to a normal termination of data communication, as recited in claims 1, 5 and 9 of the present invention.

Kenji's communication control method includes terminal equipment that communicates with a host device. The terminal equipment accesses the host device

at a time t_1 . If no transactions occur between the terminal equipment and the host device for at least a time period t_2 , then a flag relating to the terminal equipment is cleared. In addition to clearing the flag, the communication line between the terminal equipment and the host device is tentatively interrupted. In this way, useless occupancy of the line is avoided and the number of connection lines available for other terminal equipment is increased.

The communication control method of the present invention includes the step of determining whether wireless data communication between a portable information communication terminal and a data communication apparatus has been interrupted by disconnection of a communication line and whether the disconnection of the data communication is a normal termination of data communication. Kenji does not perform this step of determining whether data communication between a portable information communication terminal and a data communication apparatus has been interrupted by disconnection of a communication line. To the contrary, and as described in the abstract, Kenji discloses first determining whether or not the communication between the terminal equipment and the host device has been inactive for a time period t_2 . If there has been no communication for at least this time period, then Kenji discloses interrupting the line of communication between the terminal equipment and the host device. Kenji's step of determining whether communication has been inactive and the subsequent step of interrupting the communication line as a result of the determination are not the same as the step of determining whether data communication has been interrupted by disconnection of a communication line, as recited in the present invention.

The present invention also discloses, in response to a normal termination of data communication between the portable information communication terminal and the data communication apparatus, a step of clearing accounting on the data communication that was interrupted by disconnection of the communication line. This step of clearing the account occurs if the interrupted data communication was interrupted within a predetermined time before the normal termination of data communication. First, and as conceded by the Examiner, Kenji does not disclose "clearing accounting" as claimed. The Examiner relies upon Foladare for teaching this feature, but asserts that Kenji discloses "clearing a flag" in response to a normal termination of data communication. However, the step of clearing the flag in Kenji is not in response to a normal termination of data communication. As described in the abstract, Kenji's step of clearing the flag is in response to determining that no transactions have occurred between the terminal equipment and the host device, for at least a time period t_2 . This is different from clearing accounting in response to a normal termination of data communication, as claimed.

Further regarding the step of clearing accounting, this step is performed in the present invention "*if said data communication was interrupted* within a predetermined time before the normal termination of data communication" (emphasis added). The Examiner does not address the conditional limitation of "if said data communication was interrupted" as recited in the claims. Nonetheless, Applicants submit that none of these features are taught or suggested by Kenji. In the present invention, there is an interruption of data communication and then there is a normal termination of data communication. If the interruption of data communication occurred within a

predetermined time period before the normal termination of data communication, then the accounting of the interrupted data communication is cleared. Unlike the present invention, Kenji teaches clearing a flag if no transactions have occurred between the terminal equipment and the host device, for at least a time period t_2 . This step of clearing the flag as a result of inactivity is different from clearing accounting if the data communication was interrupted within a predetermined time before a normal termination of data communication. The time considered in Kenji has no relation to the occurrence of both an interrupted data communication and a normal termination, as claimed. Instead, the time considered in Kenji is merely a measure of inactivity of communication, and if the time of inactivity between the terminal equipment and the host device meets or exceeds a predetermined time, then line of communication between the terminal equipment and the host device is interrupted. These features of Kenji are quite different from the present invention.

Therefore, Kenji fails to teach or suggest “determining whether data communication between the portable information communication terminal and the data communication apparatus has been interrupted by disconnection of a communication line and whether the disconnection of the data communication is a normal termination of data communication” as recited in claim 1, and as similarly recited in claims 5 and 9.

Furthermore, Kenji fails to teach or suggest “in response to normal termination of data communication between the portable information communication terminal and the data communication apparatus, clearing accounting on said data communication that was interrupted between said portable information

communication terminal and said data communication apparatus by disconnection of said communication line if said interrupted data communication was interrupted within a predetermined time before the normal termination of data communication" as recited in claim 1, and as similarly recited in claims 5 and 9.

The above noted deficiencies of Kenji are not supplied by any of the other references, particularly Foladare. Therefore, combining the teachings of Foladare with Kenji still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

Foladare teaches a system and method for eliminating free paging services in a personal mobile communication system. In this system, a caller makes a call to a called party using a telephone. The call is routed to a bridging and signaling unit, which serves as a meet-me-bridge for bridging together the caller's call and the called party's return call. At this time, an interruptable announcement is played to the caller, and an optional personal identification number (PIN) may be entered by the caller. During the announcement, a caller familiar with the announcement can type-ahead, and enter any required responses before they are asked for. However, although the caller may avoid listening to the entire announcement, a page for the call to the called party is not immediately initiated upon receipt of the last character of the command string entered by the caller. Instead, the page to the called party is not initiated until: (a) the entire time for the announcement has elapsed from the receipt of the caller's call; and (b) the caller remains on the call at that time. In this way, a caller who types ahead will be billed for the page, thereby eliminating the problem of granting free paging services to those who type-ahead in an

announcement and hang up before being billed. (*See generally*, column 1, lines 32-67 to column 2, lines 1-41). As described in column 6, lines 31-36, billing may be discarded if the caller did not remain on the line long enough for a page to be initiated.

Unlike the present invention, Foladare does not teach or suggest determining whether wireless data communication between a portable information communication terminal and a data communication apparatus has been interrupted by disconnection of a communication line and whether the disconnection of the data communication is a normal termination of data communication. As shown in Fig. 1 of Foladare, telephones 101 and 125 are not wireless. Furthermore, although the pager 103 is wireless, there is no determination of whether communication between the pager and any other device has been interrupted by disconnection of a communication line. Instead, the interruption caused by a caller hanging up prior to the end of the announcement, occurs before communication is established with the pager.

In the Office Action, the Examiner concedes that Kenji does not teach "clearing accounting" as recited in the claims. However, the Examiner asserts that Foladare discloses this feature, as described in column 6, lines 31-36.

Contrary to the Examiner's assertions, Foladare does not teach or suggest the step of clearing accounting in the manner claimed. In the present invention, in response to a normal termination of data communication between the portable information communication terminal and the data communication apparatus, a step of clearing accounting on an interrupted data communication is performed. The data

communication apparatus is interrupted by disconnection of a communication line. Furthermore, this step of clearing accounting occurs if the interrupted data communication was interrupted within a predetermined time before the normal termination of data communication. In column 6, lines 31-36, Foladare discloses discarding a billing record. However, this step of discarding a billing record is not associated with a data communication that was interrupted between a portable information communication terminal (e.g., the pager disclosed in Foladare) and a data communication apparatus (e.g., the telephone as disclosed in Foladare) by disconnection of the communication line. In Foladare, the billing record is discarded before communication between the pager and the telephone is established. In this way, there is no communication between the pager and the telephone to be interrupted as claimed. Furthermore, because the billing record of Foladare is discarded before communication is established, Foladare teaches away from clearing accounting in the manner claimed.

Therefore, Foladare fails to teach or suggest, “determining whether data communication between the portable information communication terminal and the data communication apparatus has been interrupted by disconnection of a communication line and whether the disconnection of the data communication is a normal termination of data communication” as recited in claim 1, and as similarly recited in claims 5 and 9.

Furthermore, Foladare fails to teach or suggest “in response to normal termination of data communication between the portable information communication terminal and the data communication apparatus, clearing accounting on said data

communication that was interrupted between said portable information communication terminal and said data communication apparatus by disconnection of said communication line if said interrupted data communication was interrupted within a predetermined time before the normal termination of data communication" as recited in claim 1, and as similarly recited in claims 5 and 9.

Both Kenji and Foladare suffer from the same deficiencies relative to the features of the present invention as recited in the claims. Therefore, combining the teachings of Kenji and Foladare in the manner suggested by the Examiner does not render obvious the features of the present invention as now more clearly recited in claims 1, 5 and 9. Accordingly, reconsideration and withdrawal of the 35 U.S.C. §103(a) rejection of claims 1, 5 and 9 as being unpatentable over Kenji in view of Foladare is respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references used in the rejection of claims 1, 5 and 9.


In view of the foregoing amendments and remarks, Applicants submit that claims 1, 5 and 9 are in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

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To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger & Malur, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. 500.40462X00).

Respectfully submitted,

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